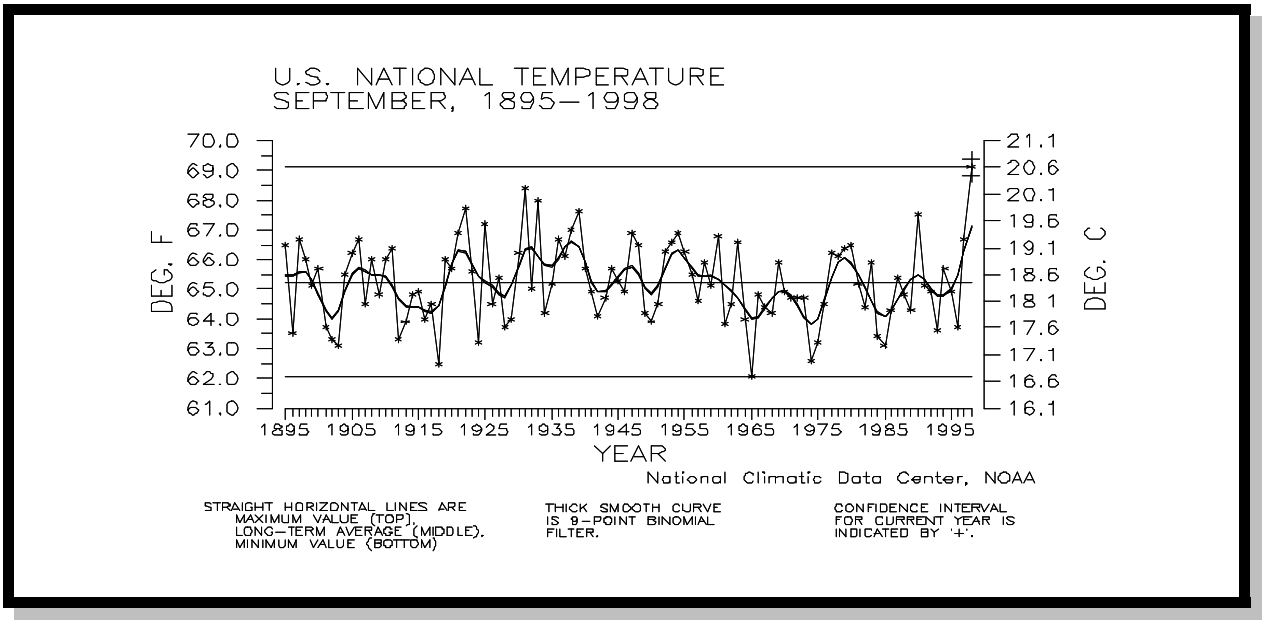
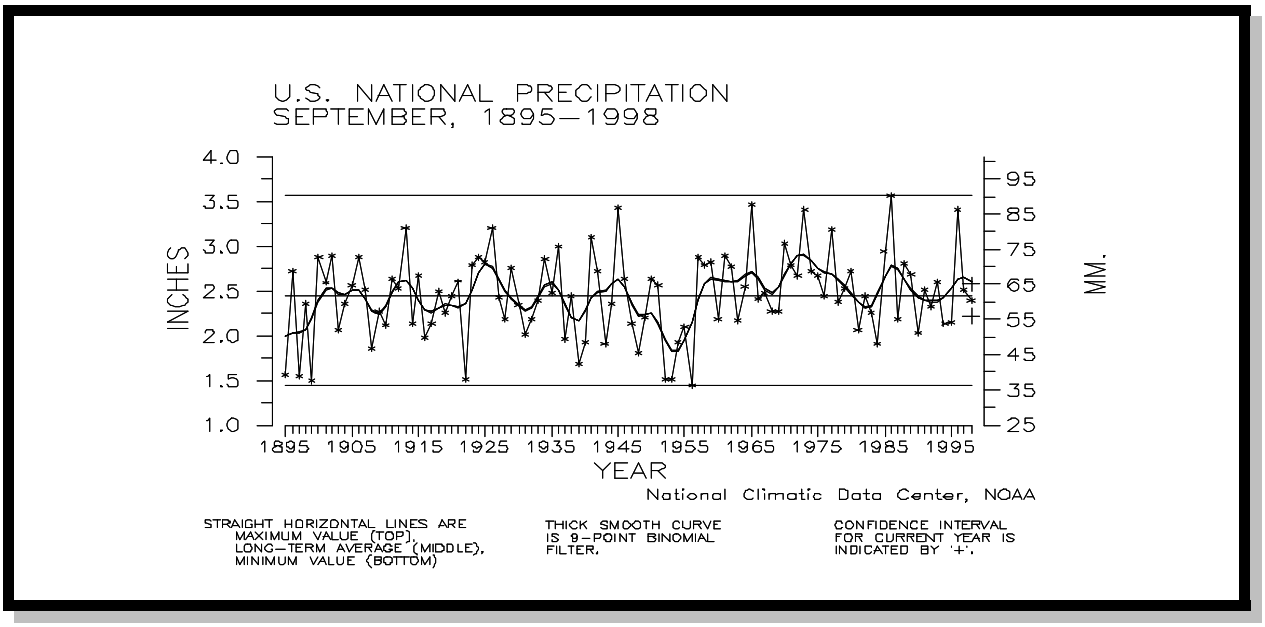
Monthly Activity Report

September 1998





Preliminary data for September 1998 indicate that temperature averaged across the contiguous U.S. was much above the long-term mean, ranking as the warmest September on record (top figure). Sixty-six percent of the country was much warmer than normal, while none of the country was much cooler than normal.

Preliminary precipitation data indicate that September 1998 was the 45th driest such month since 1895 (bottom figure). About 11 percent of the country was much drier than normal while an additional 11 percent of the country was much wetter than normal.

DIRECTOR'S HIGHLIGHTS

White House Press Briefing

The National Climatic Data Center (NCDC) provided coverage of August, and January through August, climate for the U.S.A. and the globe to the National Oceanic and Atmospheric Administration's Public Affairs office and the White House. It was another record warm month and year-to-date for the globe, while warmth, drought and floods characterized the U.S. climate. Tom Karl, NCDC Director, attended a press briefing with Vice President Gore on September 10th. Documentation is on the NCDC Web site.

GOES Data Rescue

A contract for the Geostationary Operational Environmental Satellite (GOES) Data Rescue effort was awarded to the University of Wisconsin's Space Science Engineering Center (SSEC) on September 30. The effort will transcribe over 220 terabytes of data onto modern high-density tape media, replacing the deteriorating cassettes currently held at SSEC. Once transcribed, the entire archive will be moved to the National Climatic Data Center (NCDC) for archive and servicing. The five year, $4.6M task order contract is based on availability of funds. Solicitation for funding from outside resources has not been successful to date. A briefing on this contract and the current O&M contract with SSEC is scheduled for October 16, 1998.

Antenna Installation

The City of Asheville, NC, has approved the installation of the NOAAPORT antenna on the roof of the Veach-Baley Federal Building, where the National Climatic Data Center is located. Permits have been issued, and the National Weather Service (NWS) has scheduled antenna installation for the week of October 19 - 23, 1998.

Rescuing Historical Data

The Integrated Imaging Management System (IIMS) is now complete. Orkand Corporation, under contract to the National Climatic Data Center (NCDC), built this tracking system to allow NCDC to follow the various steps in the receipt of CD-ROMs, quality assurance, quality review, and loading. Some 544 CD-ROMs have arrived at NCDC from Information Manu-facturing Corporation. The CD's contain over 4 million images of Surface Weather Observation forms. The return of paper records to NCDC was placed on a weekly schedule in order to speed the flow of documents back from West Virginia.

CLIMATE DATA AND INFORMATION SERVICES

✦ Data Base Development

New Level 1b High Resolution Picture Transmission Data Sets

Beginning September 23, 1998, the National Climatic Data Center's Satellite Services Branch in Suitland, MD, began receipt and archive of Level 1b High Resolution Picture Transmission (HRPT) data sets from the Monterey, CA, Command and Data Acquisition (CDA) station. This data is in addition to that already received and archived from

CDA stations at Fairbanks, AK, and Wallops Island, VA, and provides increased coverage for the Western U.S. and Mexico.

✦ Data and Information Distribution

September 1998 Data Sales

A review of FY98 customer service activities reveals a continuing shift toward on-line customer access of National Climatic Data Center (NCDC) data. Electronic mail requests evidenced a 33 percent increase over the previous fiscal year period. The growing popularity of the NOAA National Data Center (NNDC) On-Line Data Store resulted in 100,000 customer contacts during its nine months of existence. Eleven Gigabytes of data were downloaded by customers from this Internet site during the fiscal year. Data sales, excluding subscriptions, during FY98 represented a slight 1 percent increase over FY97 totals. NCDC enters FY99 with the definitive shift toward on-line Internet access of climate data well established.

Hurricane Georges Web Page Released

The National Climatic Data Center (NCDC) released a special weather event WWW page on Hurricane Georges. This page is located at: http://www.ncdc.noaa.gov/ol/reports/georges/georges.html. The page contains numerous satellite images of the hurricane, preliminary rainfall totals, a preliminary damage report, and some historical hurricane climatology track maps.

Hurricane Bonnie Report

The National Climatic Data Center (NCDC) placed a Web page on-line describing Hurricane Bonnie and its effects on South Carolina, North Carolina, and Virginia. The page includes a brief narrative, a number of satellite and radar images of the storm, rainfall data, and links to other sources of information. The page is accessible through "Weather Events of 1991-1998" at: http://www.ncdc.noaa.gov/ol/reports/weather-events.html, and through NCDC's central site for extremes and events: http://www.ncdc.noaa.gov/ol/climate/severeweather/severeweather.html.

China Flooding Summary

The National Climatic Data Center (NCDC) placed a Web page on-line describing China's severe summer flooding, with a brief narrative, satellite images of river flooding, and daily/monthly climatic data. During the June-July period, nine stations reported more than 40 inches of rainfall, with a maximum of 68.28 at Qinzhou in southeastern China. This included an eight-day period in early July with 29.18 inches of rain. The daily and monthly data were produced from a sophisticated system of programs which decode and quality control the synoptic data into a global hourly/synoptic data set, then into a daily summary, and finally summarize the daily data into a monthly summary. China officially reported over 3,000 deaths and over 20 billion U.S. dollars in damages. The Web page is accessible via: http://www.ncdc.noaa.gov/ol/reports/weather-events.html

NOAA National Data Center Server Team

The NOAA National Data Center (NNDC) Server team met September 21-25 at the National Oceanographic Data Center (NODC). The team accomplished the primary goals of installing server software (WebTie) and the Interface Data Base (IDB) at NODC; developing a global map server using the Environmental Systems Research Institute's (ESRI) Map Objects; building a hierarchical text-based interface for users to choose a data set and a global region; retrieving data from station/point locations on maps; providing access to several new data sets through the IDB; developing access to multiple graphical views of the National Climatic Data Center station and gridded data sets; demonstrating current capabilities and presenting an FY99 development schedule to the NVDS Data System Advisory Council.

SRRS Data Replacement

Representatives of the National Weather Service (NWS) and the National Centers for Environmental Prediction (NCEP) met at the National Climatic Data Center (NCDC) to plan for the replacement of the Service Records Retention System (SRRS) data delivery system required when the Automation of Field Operations and Services (AFOS) system is terminated. The group recommended that the current procedures of sending the SRRS data to NCDC on 3480 tape should continue until AFOS termination, and that NCDC convert software, or write new software, to process those tapes on a UNIX system. NCDC will develop procedures to extract the SRRS data required for NWS legal purposes from the NOAAPORT data stream, and write those data to the Hierarchical Data Storage System (HDSS) after NOAAPORT installation.

Build 10 Beta Test

The National Climatic Data Center (NCDC) will participate in the National Weather Service Operational Support Facility (NWS/OSF) beta test of Build 10 software to be installed at Weather Surveillance Radar - 1988 Doppler (WSR-88D) Radar sites. The Beta test is scheduled to begin on September 21 and conclude on October 23. Two main upgrades in Build 10 are the addition of adaptable parameters on the 8mm tapes and a modification to improve the ability of the field-site hardware to accept and record on recycled 8mm tapes. NCDC will examine the 8mm tapes and optical disks recorded at Raleigh, NC, and Wakefield (Norfolk), VA, during the test period and report any problems encountered to NWS Headquarters and OSF during a conference call scheduled for October 23.

EXABYTE Software May Improve Data Recording at NEXRAD Sites

Twenty to thirty percent of the Next Generation Weather Radar (NEXRAD) sites have difficulty recording data on recycled 8mm tapes. The National Weather Service Operational Support Facility (NWS/OSF), National Climatic Data Center (NCDC), Exabyte Corporation and several field sites have been trying to solve the problem. NCDC sent several degaussed tapes to Exabyte for examination to determine the difference between a recycled and a new Exabyte tape. Apparently, a new tape has certain header records which are destroyed when degaussed and some systems, such as the NEXRAD computers, cannot recognize the tape without those header records. Exabyte will send NCDC software which will rewrite the header records on a degaussed tape. NCDC and OSF will test several of the tapes to determine if improvements in recording at the field sites can be achieved.

Pathfinder Operations

Pathfinder is the name of the National Weather Service (NWS) prototype equipment used to display and manage data received over the NOAAPORT Receive System. This equipment has been replaced at NWS offices with the more advanced AWIPS equipment. The National Climatic Data Center (NCDC) has received some of the Pathfinder equipment, but has been unable to operate it. PRC Inc., a NWS contractor that originally set up and maintained the Pathfinder equipment, will send a proposal and cost estimate to NCDC to bring the NCDC Pathfinder equipment up to operational status.

RRS Study Completed

The Regional Climate Centers (RCCs) have completed their study of the uses of upper air data to be generated by the National Weather Service's new Rawinsonde Replacement System (RRS). The project report, "A Study to Determine the Options for the Use, Processing, and Archiving of Observational High Resolution Upper Air Data" details the results of a user survey conducted by the RCCs. The National Climatic Data Center will use the study to aid in its design of a new upper air processing system based on the RRS.

✦ Satellite Data Requests

SOFIA Concerned About Water Vapor

A researcher for a National Aeronautics and Space Administration (NASA) project contacted the National Climatic Data Center and requested sample Geostationary Operational Environmental Satellite (GOES) data prior to 1996 to compare against astronomical measurements collected in a previous experiment. The current NASA project is called SOFIA (Stratospheric Observatory for Infrared Astronomy) (http://www.sofia.arc.nasa.gov), and is basically an aircraft which will be modified to carry a telescope up to 45,000 feet altitude. The project plans to use GOES 8/10 water vapor images to assure that most of the water vapor is below that height. To test whether the data will be useful, several GOES water vapor scenes taken before 1996 will be used to compare with astronomical measurements that were taken during former test flights on a similar aircraft.

✦ Requests from News Media

NBC News Report

A news clip on the science of climate and climatic change was presented on the NBC Nightly News on September 17th, featuring Dr. Tom Peterson and other National Climatic Data Center (NCDC) personnel. The clip included shots of several work areas within NCDC.

Charlotte Observer Uses NCDC Hurricane Track Information

A reporter from the "Charlotte Observer" newspaper in Charlotte, NC, obtained hurricane track information for prominent historical hurricanes which severely impacted North Carolina. These included Hurricanes Hugo, Hazel, Fran, Bob, and Bertha. The paper is developing a graphic map of major hurricanes affecting the state, and needed specific track and background information on these particular historical storms. The reporter wants to compare the track information of these storms with the path of 1998's Hurricane Bonnie.

Greek Isles Normals Provided

American Express' "Travel" magazine requested help from the National Climatic Data Center in obtaining normal monthly precipitation data for several sites in the Greek Isles. Monthly data derived from the World Meteorological Organization's "Climatological Normals (CLINO) for the Period 1961-1990" (WMO No. 847) for stations at Milos, Naxos, and Paradissi on the Isle of Rhodes were faxed to the magazine so that their production schedule could be met.

Rain Needed in Western North Carolina

National Climatic Data Center (NCDC) meteorologist Tom Ross did two TV interviews for a local TV station (WLOS) in Asheville, NC, during the week of September 14, 1998. The interviews dealt with the weather and climate in western North Carolina this year and how the weather has progressed from extremely wet to extremely dry. Only 7.14 inches of rain have fallen from May through mid-September in the Asheville area, compared to the long-term average of 16.79 inches. Long-range predictions for the fall and winter months in terms of temperatures and precipitation were also discussed.

✦ Private Industry Interactions

Hurricane Bonnie Marketed

A private company operating out of Charleston, SC, requested two GOES-8 color-enhanced IR satellite images of Hurricane Bonnie from the National Climatic Data Center (NCDC) Satellite Services group. The hurricane toyed with, and finally hit, the North Carolina coastline on August 26, 1998. The company requesting the images has a reputation for offering high-quality weather-related reports, posters, and T-shirts to the public. Recent success with marketing such items for

Hurricanes Hugo, Andrew, and Fran proved the success of such strategies. The company plans to introduce a new item containing the Hurricane Bonnie image - mouse pads!

GOES Images Used

The Southern Farm Bureau Casualty Insurance Company will use one of the National Climatic Data Center's (NCDC) Geostationary Operational Environmental Satellite (GOES) satellite images showing two tropical cyclones, Bonnie and Danielle, for its next quarterly publication, *Mutual/Casualty Courier*. The issue is distributed to agents and employees throughout the south. This particular issue will highlight natural disasters and how the insurance industry is working to mitigate damages from these occurrences. The particular satellite image is available at: www.ncdc.noaa.gov/ol/satellite/olimages.html.

✦ Regional Climate Centers

Visit to MCC

Steve Doty, of the National Climatic Data Center (NCDC), traveled to the Midwestern Climate Center (MCC) to meet with the new staff. Dr. Steve Hilberg has been named the interim Director, replacing Dr. Ken Kunkel. In addition, a new regional climatologist, Dr. Mike Palecki, has joined the staff. Mike was formerly a professor at the University of Nebraska. Arrangements are being made to have MCC user service staff (and the Western Regional Climate Center staff) visit NCDC as the first action item under the Climate Services Plan approved earlier in the year.

MAC Summary Web Page Planned

Discussions were held with Jim Angel, Illinois State Climatologist, concerning his involvement in the development of a "state" Metropolitan Area Climate (MAC) summary Web page. The idea is to have a link from the NCDC MAC page to the state page so that additional data from non-NOAA sources can be made available to the public. Jim has agreed to develop a prototype for Chicago where there are several state and local observing networks.

Other RCC Activities

Real-time Cooperative data continues to flow from the RCCs to NCDC. Attention has turned to reviewing the quality of the data. Several weaknesses have been identified and action is underway to correct them. The RCCs continue to provide climate impact statements to NCDC. These reports have been very beneficial as they are combined into national impact statements.

SCIENTIFIC AND PROFESSIONAL ACTIVITIES

✦ Working Groups/ Committees/Meetings

China

The Sixth Meeting of the PRC-U.S. Joint Coordination Panel for Data and Information Cooperation was held in Tianjin, China, September 14-18, 1998. U.S. participants included Mr. Joe Elms of the National Climatic Data Center. Discussions were held on progress achieved during the past intercessional period and a cooperation plan was established for the next period. Among items discussed were the keying of the U.S. Marine Meteorological Journals for the period 1879-1893. Discussions were held between the National Oceanographic Data Center staff and Mr. Elms to establish details of the keying format and schedule of the project. Two new items were added to the list

for cooperative research and data exchange: Coral Reefs and Harmful Algal Blooms. A Workshop on Coastal Ocean Management was held the second day. Joe Elms presented an update on the status of global surface marine collections and the current US-PRC Implementation Plan.

Joint CCl/CLIVAR Meeting

Dr. Tom Peterson, of the National Climatic Data Center (NCDC), attended the "Joint CCl/CLIVAR (Climate Variability and Predictability) Task Group on Climate Indices" meeting in the United Kingdom, September 2-4, 1998. The group will emphasize data collection and analysis of temperature and precipitation indices based on daily data. Dr. Peterson was named chairman of a new indices task group, whose main function will be contributing to IPCC 2000. The first report is due this November.

COMPS Requirement Review

A Customer Order Management Processing System (COMPS) Build Three Requirements Review was held at the National Climatic Data Center (NCDC) during the first week of September. Personnel from the National Oceanographic Data Center (NODC), National Geophysical Data Center (NGDC), NCDC, UNISYS, Systems Acquisition Office (SAO), and the Marada Corporation attended this meeting. Major developments areas identified for Build Three, Subscription Processing and Marketing, were discussed.

✦ Interactions with NOAA Line Offices

Surface Weather Observations Workshop

The National Climatic Data Center's (NCDC) Neal Lott, and Kenneth Hubbard of the High Plains Climate Center, participated in a National Weather Service-sponsored Surface Weather Observations Workshop in Silver Spring, MD, September 23-25, 1998. The purpose of the workshop was to develop an updated set of requirements for surface weather observations in support of forecast, warning, and climate programs. There is a growing demand for higher density hourly and daily observations, and a concurrent increase in various observing networks (federal, state, etc.) nationwide. This workshop focused on the identification, assessment, and potential integration of these data into a coherent system of collection and archival. A number of issues were discussed including metadata, data formats, timeliness of receipt, instrumentation, data quantity/completeness, and quality control. Follow-up workshops and working groups are planned.

EMPLOYEE ACTIVITIES

✦ EEO and Community Outreach

El Niño/La Niña Discussed at Local Meeting

Sam McCown, of the National Climatic Data Center, spoke on the subject of El Niño/La Niña events and the influence these weather phenomena have on state and local weather in North Carolina at the Highland Farms Men's Club in Black Mountain, NC, on September 15, 1998. Based on previous La Niña events, it appears western North Carolina may be heading into a somewhat warmer and drier winter than average. This agrees with three-month outlooks prepared by the Climate Prediction Center.

Career Day

William Angel represented the National Climatic Data Center at the Weaverville, NC, Primary School Career Day. William described some of the tasks performed by meteorologists and presented a slide show on hurricanes and tornadoes.

✦ Personnel Resources

Excellence in Government

On September 16-17, Tom Peterson completed the last session of his one-year Excellence in Government Fellowship. One of the session speakers was Mary Lou Anderson, whose leadership quote guided much of their work this year: "Leaders are called to stand in that lonely place between the no longer and the not yet and intentionally make decisions that will bind, forge, move and create history. We are not called to be popular, we are not called to be safe, we are not called to follow. We are the ones called to take risks, we are the ones called to change attitudes; to risk displeasures, we are the ones called to gamble our lives for a better world." As Senior Fellows of the Council for Excellence in Government, the group can keep in touch with other Senior Fellows and continue the growth and the leadership journey that this program initiated through an interactive Senior Fellows Web site that was recently established.

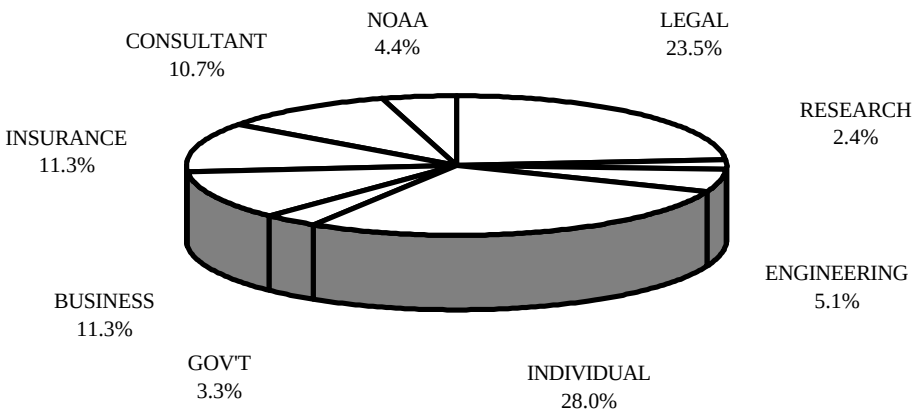
✦ Training

Crystal Report Training

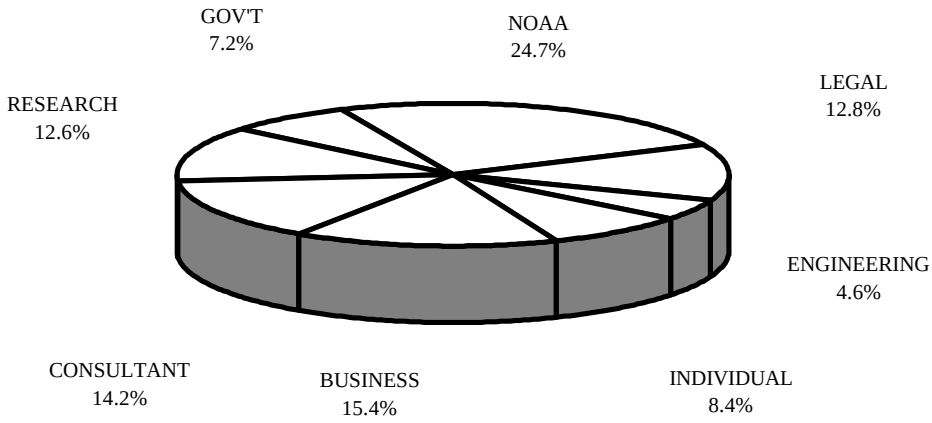
Several National Climatic Data Center employees attended a two-day advanced crystal report training class provided by IKON Technologies. The class was very beneficial for creating Customer Order Management Processing System (COMPS) reports.

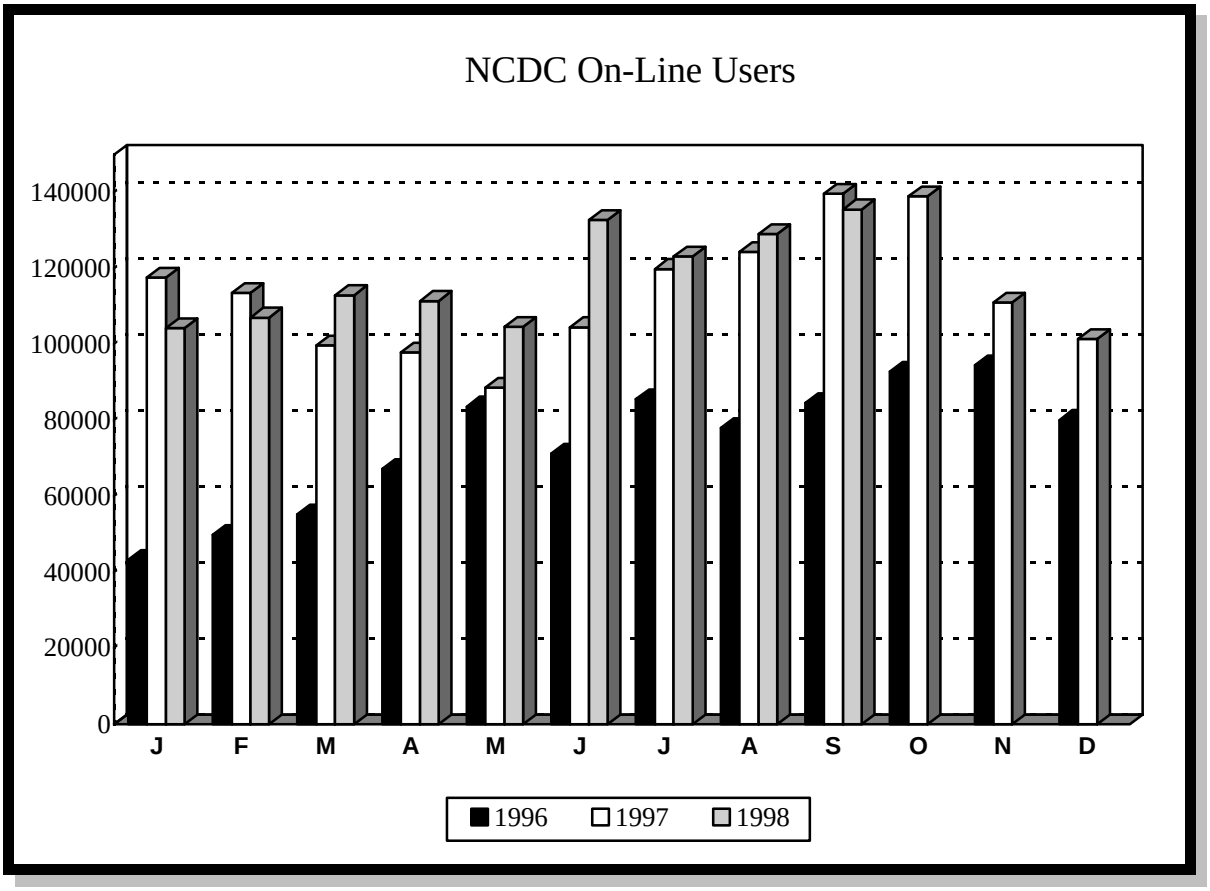
The following charts and graphs show the latest National Climatic Data Center user and data statistics.

Customer Profile Based on Orders



Customer Profile Based on Order Cost

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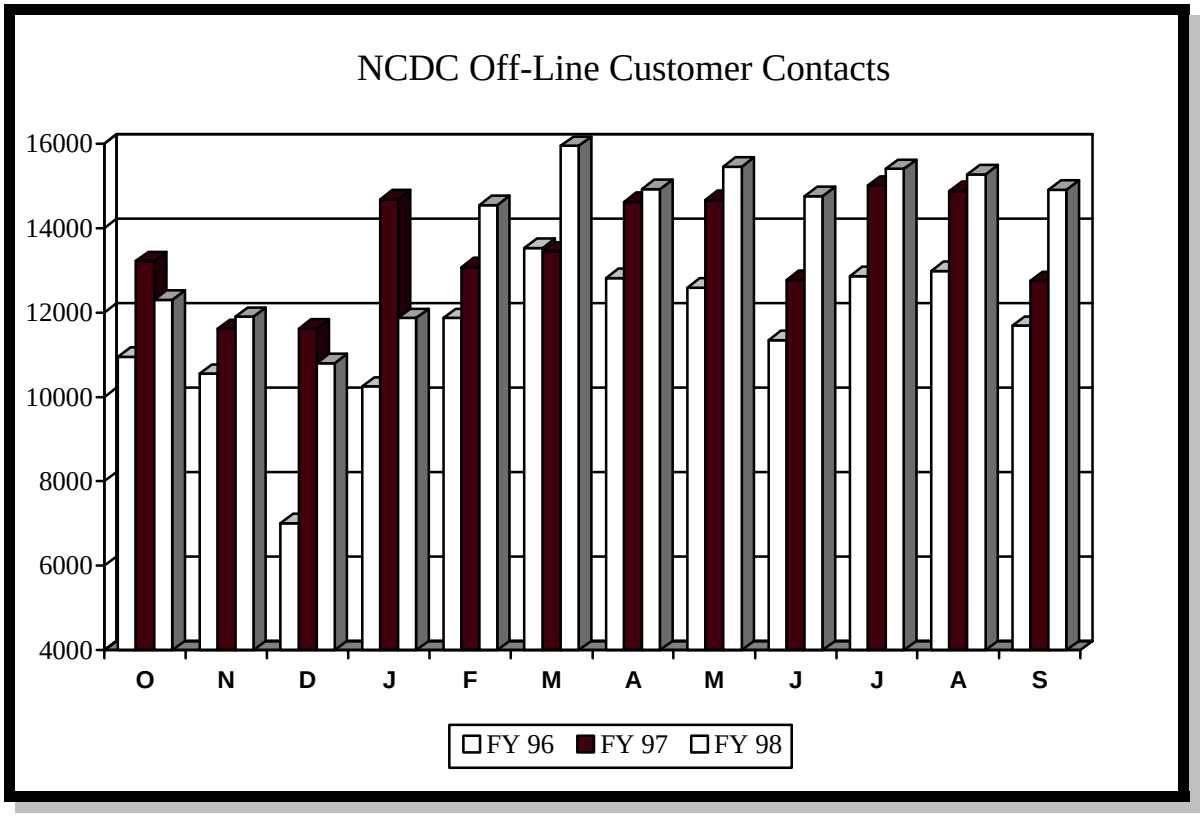
80000
60000
40000
20000
0
J F M A M J J A S O N D
1996 1997 1998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12000
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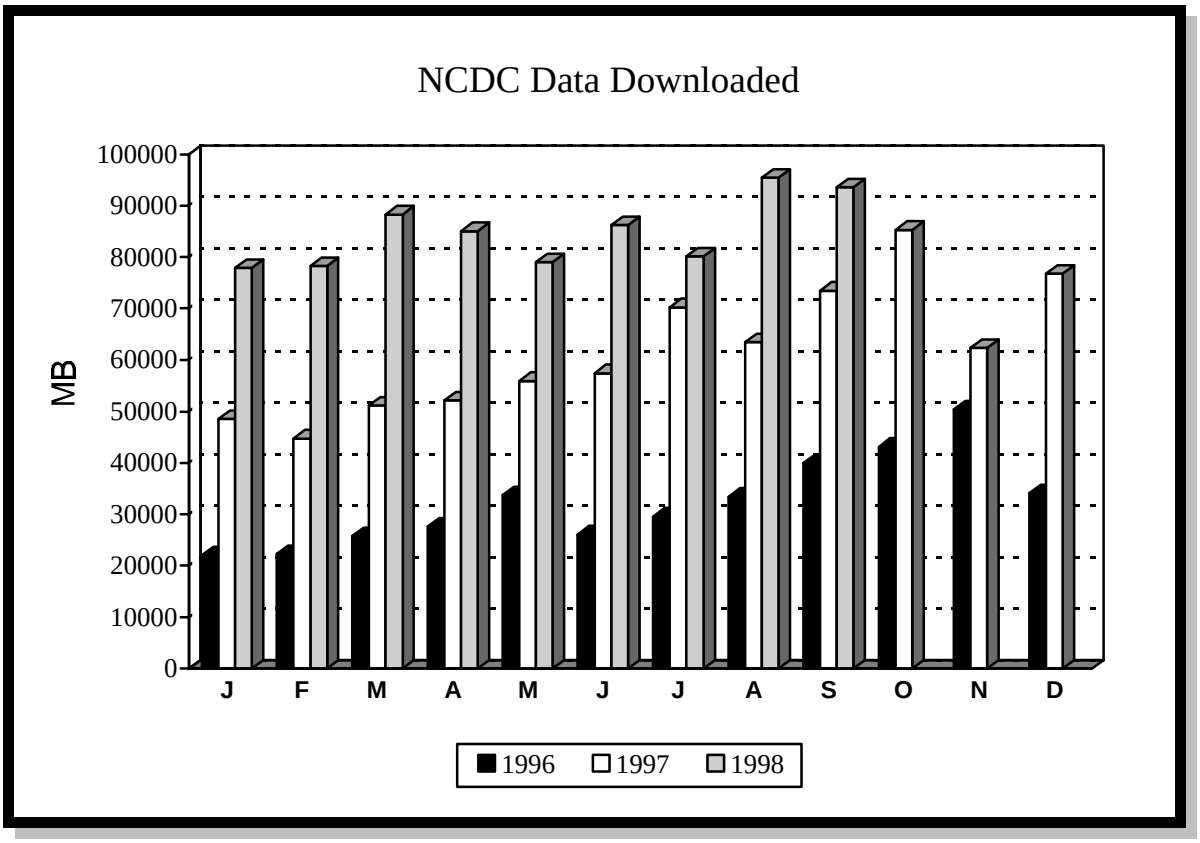
8000
6000
4000
O N D J F M A M J J A S
FY 96 FY 97 FY 98


NCDC Data Downloaded
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0
J
F
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M
J
J
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1996
1997
1998